

Key Concepts, Questions and Terms: Lecture I, IAP Neuroanatomy Course

Directions

Superior vs. Inferior

Lateral vs. Medial

Dorsal vs. Ventral

Posterior vs. Anterior

Rostral vs. Caudal (*cauda* means what?)

Are dorsal v. ventral and posterior v. anterior and rostral vs. caudal the same thing in body and brain? What's the source of this confusion?

Planes of Section

Coronal

Horizontal

Sagittal

Midsagittal

Neuron

Dendrite

Cell body

Axon

Gray Matter

White Matter

Why does this matter? Where does this distinction come from?

Nucleus

Peripheral Nervous System (PNS)

Receptor

Nerve

Dorsal Root Ganglion

PNS vs Central Nervous System (CNS): Where's the line?

Why was this distinction relevant? What is undermining it?

Protective layers of CNS

Dura Mater (what does this translate into meaning?)

Arachnoid Mater

Pia Mater (this means?)

Spinal Cord

4 sections

Cauda Equina (means what? Where is it?)

Entoumbences (What are they, where are they, and why are they?)

Hindbrain: Rhombencephalon

MEDULLA OBLONGATA! Home of the nucleus ambiguus....

Fibers: Pyramidal tracts (Where did they get this name?)

Neurons: Gracile and cuneate nucleus at the intersection of the spinal cord and medulla: What kind of information do they carry?

Pons

Cranial Nerves: How many?

Cerebellum

You said *how many* neurons?

Hemispheres

Vermis (what does this mean?)

Peduncles

Midbrain: Mesencephalon (What does this mean?)

Substantia Nigra (Hmmmmm, what could this mean?)

Tectum (What does this mean?)

Superior Colliculus: What kind of information(s) does it get?

Inferior Colliculus: What kind of information does it get?

Brainstem (what are the components?)

Diencephalon (what does this mean?)

Thalamus

What goes through here? (Actually, what *doesn't* go through here?)

Ventral Posterior (VP) Nucleus—receives what kind of information?

Hypothalamus: Is where and does what?

Telencephalon (what does this mean?)

Cerebral Cortex (what does this phrase mean? what happens here?)

How many layers of neurons?

Terminology for the bark

Sulci

Fissure

Gyri

4 lobes

Precentral gyrus, central sulcus, postcentral gyrus: What do they do? Where are they?

Brodmann's areas

Corpus Callosum (what does this mean?)

Rhinencephalon (what does this mean?)

Olfactory system: What are its distinctions? In sheep vs. humans?

Hippocampal formation

Ventricles (how many, where are they, what do they do?)